

REMARKS

Applicants have amended claims 1, 12, 14, 37, and 44 as set forth above. No new matter has been added by way of these amendments. In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

The Office has objected to claim 14 asserting the limitation “the set of color filters” does not appear in claim 12 from which claim 14 depends. Accordingly, Applicants have amended claim 14 in accordance with the Office’s suggestion to, “the set of filters” which does appear in claim 12. In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw the objection to claim 14.

The Office has objected to the drawings asserting they contain handwritten labels which are difficult to read and requesting corrected drawing sheets in compliance with 37 CFR 1.121(d). Accordingly, accompanying this Amendment are a set of replacement sheets for the drawings to address the Office’s objection relating to the handwritten drawings. No new matter has been added in the replacement sheets for the drawings. In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw the objection to the drawings.

The Office has rejected claims 1-22 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,864,364 to Ohyama et al. (Ohyama) in view of US Patent No. 5,347,378 to Handschy et al. (Handschy), claims 8, 9, 19 and 20 under 35 U.S.C. 103(a) as being unpatentable over Ohyama in view of Handschy as and further in view of US Patent No. 6,256,067 to Yamada (Yamada), and claims 37-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyama in view of US Patent No. 5,748,236 to Shibazaki (Shibazaki). The Office asserts Ohyama discloses: one image acquisition system having two or more color channels (Figure 4); each of the channels having a different spectral sensitivity (Figure 7A); the image acquisition system acquiring a first series of images of the first scene (Figure 7B; c. 7, II. 48-50; c. 9, II. 54-65); and a set of filters (Figure 4, Item 2), each of the filters having a different spectral transmittance (Figure 7A), the filters filtering a different image in series of images (Figure 7B; c. 9, II. 54-65). The Office acknowledges that Ohyama does not disclose filters which are non-interference filters which are placed between the scene and the image acquisition system, but asserts that Handschy discloses a selective filter apparatus (e.g. Figure 1) for use in camera systems by placing the filter apparatus in front of an image acquisition system (Figure 6a). The Office asserts the selective filter of Handschy

can be of either absorption (i.e. non-interference) or interference type (c. 4, II. 63-66; c. 17, II. 50-59) and have faster switching response times than mechanical color wheel filter systems (c. 1, I. 39 - c. , I. 2; c. 4, II. 54-66). The Office also asserts that Ohyama discloses: one image acquisition system having two or more color channels (Figure 4); each of the channels having a different spectral sensitivity (Figure 7A); and the use of a color filter wheel to create multi-spectral images (Figure 4, Item 2). The Office acknowledges that Ohyama does not disclose a set of two or more illuminants, where each illuminant has a different spectral power distribution and illuminating one of the images of the first scene, but asserts that Shibazaki discloses a camera in which a color filter wheel for creating individual images of different colors is replaced by a set of illuminants (Figure 12), where each of the illuminants has a different spectral power distribution (c. 15, II. 4-18).

Ohyama, Handschy, Yamada, and Shibazaki, alone or in combination, do not disclose or suggest, “each of the image acquisition systems having an imaging device which has two or more color channels, each of the channels having a different spectral sensitivity . . . each of the non-interference filters . . . is positioned between the scene and the one or more image acquisition systems” as recited in claim 1, “one or more image acquisition systems each having an imaging device which has two or more color channels, each of the channels having a different spectral sensitivity . . . each of the non-interference filters . . . is positioned between the scene and the image acquisition system” as recited in claim 12, “each of the image acquisition systems having an imaging device which has two or more color channels, each of the channels having a different spectral sensitivity . . . illuminating each image of the first series of images with a different illuminant from a set of two or more illuminants” as recited in claim 37, or “an image acquisition system having an imaging device which has two or more color channels, each of the color channels having a different spectral sensitivity . . . a set of two or more illuminants, each illuminant having a different spectral power distribution and illuminating one of the images of the first scene” as recited in claim 44.

The Office has asserted it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the mechanical color wheel of Ohyama with the non-interference filters of Handschy and to place the filters of Handschy in front of the image acquisition as shown in figure 6a of Handschy. Additionally, the Office has asserted it would have been obvious to one of ordinary skill in the art to replace the color filter wheel of Ohyama with the set of illuminants disclosed by Shibazaki to remove the complexity of synchronizing the rotating of a color wheel with the multi-spectral image

capture image operation. Accordingly, in both instances the Office is replacing the mechanical color wheel of Ohyama with either the non-interference filters of Handschy or the set of illuminants disclosed by Shibazaki. Additionally, the Office's has acknowledged that the CCD 3 shown in FIG. 4 in Ohyama is only a signal channel device.

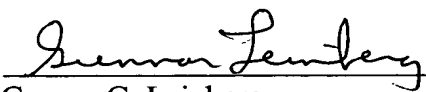
Applicants note with appreciation the Office's suggestion that the existing claims only require the image acquisition system to be a multiple color channel device, not the CCD or image sensor to be a multiple color channel device. Thus, Applicants have amended the claims in accordance with the Office's suggestion to specifically recite that each image acquisition system has an imaging device which has two or more color channels. As acknowledged by the Office, neither Ohyama nor any of the other cited references, disclose or suggest, the combination of non-interference filters placed between the scene and an imaging device in each of the imaging acquisition system which has two or more color channels or the combination of a set of two or more illuminates and an imaging device in each of the imaging acquisition system which has two or more color channels as claimed.

Accordingly, in view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw the rejections of claims 1, 12, 37, and 44. Since claims 2-11 depend from and contain the limitations of claim 1, claims 13-22 depend from and contain the limitations of claim 12, claims 38-43 depend from and contain the limitations of claim 37, and claims 45-50 depend from and contain the limitations of claim 44, they are distinguishable over the cited references and are patentable in the same manner as claims 1, 12, 37, and 44.

In view of all of the foregoing, applicant submits that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

Date: Dec. 28, 2005


Gunnar G. Leinberg
Registration No. 35,584

NIXON PEABODY LLP
Clinton Square, P.O. Box 31051
Rochester, New York 14603-1051
Telephone: (585) 263-1014
Facsimile: (585) 263-1600